



IRON



Iron's functions in the plant:

- Chlorophyll development and function
- Plays a role in energy transfer within the plant
- Constituent of certain enzymes and proteins
- Functions in plant respiration and plant metabolism
- Involved in Nitrogen fixation

Common symptoms of Iron deficiency are:

- Leaves initially turn pale green
- Young leaves begin to show interveinal chlorosis without becoming necrotic
- A side effect can be Nitrogen deficiency in legumes, since iron is necessary for nodule formation and function

Iron can be deficient in:

- **Soil pH** - High soil pH reduces Iron availability while acidic soils increase Iron availability. High pH is increased in waterlogged, compacted, or other poorly aerated soils.
- **Low OM soils** - OM compounds are able to form Iron complexes that improve availability.
- **Saturated, compacted, poorly aerated soils** - In acid soils, this condition can increase availability (to the point of toxicity).
- **High soil Phosphorus** - Excessive amounts of soluble Phosphorus, or high rates of Phosphorus fertilizer, have been demonstrated to inhibit Iron uptake in many crops.
- **Form of Nitrogen applied** - Increased Nitrate Nitrogen uptake can reduce Iron uptake by causing an anion-cation imbalance in the plant.
- **Fe:Zn balance** - Zinc deficiency has been shown to increase the Iron uptake of many crops, sometimes to the point of toxicity. Conversely, high Zinc availability reduces Iron uptake.
- **Fe:Mn balance** - It is well documented that these two elements are antagonistic, one will inhibit the uptake of the other.
- **K:Fe balance** - Potassium appears to play a very specific, but poorly understood role in the utilization of Iron. Some research shows that low Potassium availability can result in increased Iron uptake.
- **Fe:Mo balance** - High levels of available Molybdenum can reduce Iron uptake by causing the precipitation of Iron Molybdate on the root surfaces. This is especially important in alkaline soils where the high pH reduces Iron availability while increasing that of Molybdenum.
- **HCO₃** - Iron deficiency can be induced by the presence of the bicarbonate ion in the soil.



Iron is an important nutrient for all crops.

The following crops may show a high response to a Iron application:

Barley • Blueberry • Broccoli • Cauliflower • Clover • Dry Bean • Flax • Grape • Grapefruit • Grass • Lettuce • Orange • Pea • Peanut
Pear • Radish • Raspberry • Rice • Sorghum • Soybean • Spinach • Strawberry • Sudangrass • Sugar Beet • Table Beet • Tomato

Always soil test before any recommendations are finalized.

If soil tests require adding Iron, Rainbow Plant Food from Nutrien has several Rainbow, Super Rainbow, and International grades that contain Iron to offer to your customers. We can also formulate an analysis including Iron for your specific crops needs. Every granule will include Iron for better distribution and ability for crop uptake.

Visit your Local Rainbow Dealer to Learn How Super Rainbow can Help your Crops Grow Better

www.RainbowPlantFoodProducts.com • Customer Service: 1-800-763-0334 • 1-800-476-2122

Precision Feeding • Balanced Nutrition • Complete Micronutrient Delivery
• Increased Yield • Improved Crop Quality



Americus Grades & Analysis

GRADE			TOTAL	WS								WS	MAX.	NITRATE
N	P	K	Mg	Mg	Ca	S	B	Cu	Fe	Mn	Mn	Zn	Cl	N
Super Rainbow™														
16	4	8	1.00	1.00		12.00	.030		3.00	.30	.001	.10	6.00	1.00
10	10	10	2.00	2.00	3.00	12.00	.070			.25	.001	.10	6.00	.50
5	20	20	2.00	2.00		4.00	.130			1.00	.001	.30	15.00	
6	6	18	4.00	4.00	4.00	10.00	.050		.50	.30	.001	.10	3.00	3.00
5	22	6	3.00	3.00	5.00	8.00	.500		1.00	2.00	.001	.60	3.00	
5	12	12	3.00	3.00	6.00	7.00	.150		.20	.40	.001	.30	2.00	2.00
4	8	12	4.00	4.00	6.00	8.00	.030			.20	.001	.10	1.50	2.00
3	9	18	2.00	2.00	6.00	8.00	.130			1.00	.001		14.00	
Rainbow™														
14	4	14	1.00	1.00		12.00	.100		1.00	.25	.001	.10	12.00	.50
10	5	25	1.00	1.00		6.00				1.50	.001	.25	22.00	1.25
6	12	18			5.00	10.00	.050		.25			.05	2.50	
5	15	30	1.00	1.00		4.00	.100			.50	.001	.15	26.00	
5	10	15	1.00	1.00	7.00	3.00	.100			.25	.001	.10	12.00	
International														
13	13	13				10.00			.10				12.00	.50
10	10	10				8.00			.20				9.00	.50
5	10	30				3.00	.030		.20	1.00	.001	.10	26.00	
5	10	15			8.00	6.00							13.00	.50

Carolina Grades & Analysis

GRADE			TOTAL	WS								WS	MAX.	NITRATE
N	P	K	Mg	Mg	Ca	S	B	Cu	Fe	Mn	Mn	Zn	Cl	N
Super Rainbow™ Tobacco														
13	0	14	3.00	3.00		14.00	.033			.10	.001	.10	2.00	2.60
6	12	18	3.00	3.00	2.00	8.00	.033		.10	.10	.001	.10	3.00	3.00
6	6	18	4.00	4.00	4.00	10.00	.050		.50	.30	.001	.10	3.00	3.00
6	3	18	4.00	4.00	4.00	10.00	.033		.10	.10	.001	.10	3.00	3.00
Super Rainbow™ Sweet Potato														
6	3	18	2.00	2.00	5.00	9.00	.200		.10	1.00	.001	.20	13.00	
Super Rainbow™														
3	7	28	3.00	.001		8.00	.250			1.50	.001	.50	21.00	
Rainbow™ Tobacco														
8	16	24	1.50	1.50		6.00	.033			.10	.001	.10	4.00	4.00
8	8	24	2.00	2.00	1.00	7.00	.033		.10	.10	.001	.10	4.00	4.00
Rainbow™ Sweet Potato														
8	4	24	1.00	1.00		6.00	.150		.25	.12	.001	.08	20.00	
Rainbow™														
14	4	14	1.00	1.00		12.00	.100		1.00	.25	.001	.10	12.00	.50
International														
5	10	30				3.00	.30		.20	1.00	.001	.10	26.00	

Florence Grades & Analysis

GRADE			TOTAL	WS								WS	MAX.	NITRATE
N	P	K	Mg	Mg	Ca	S	B	Cu	Fe	Mn	Mn	Zn	Cl	N
Super Rainbow™														
13	13	13	2.00	2.00		9.00	.100		.10	.40	.001	.20	9.00	.70
Rainbow™														
15	5	10	1.00	1.00		15.00	.100		1.00			.10	8.00	.70
13	13	13	1.00	1.00		9.00	.050		.10	.20	.001	.10	10.00	.70
6	12	18			5.00	10.00	.050		.25			.05	2.50	
5	15	30	1.00	1.00		4.00	.100			.50	.001	.15	26.00	
5	8	21	1.00	1.00		10.00	.350		.10			1.40	18.00	
International														
13	13	13				10.00			.10				12.00	.50
9	10	30				3.00	.030		.20	1.00	.001	.10	26.00	

Note: Some of these grades may be seasonal. Please contact your sales representative for availability.